

Purpose: To assess lightweight water purification systems.

Background: The Office of Naval Research (ONR) is developing improved water production capabilities for the Marine Corps. Their Lightweight Water Purifier (LWP) project originated with the idea to simplify the new, but existing Army LWP design, reduce the overall system weight and footprint/cube, and make the LWP

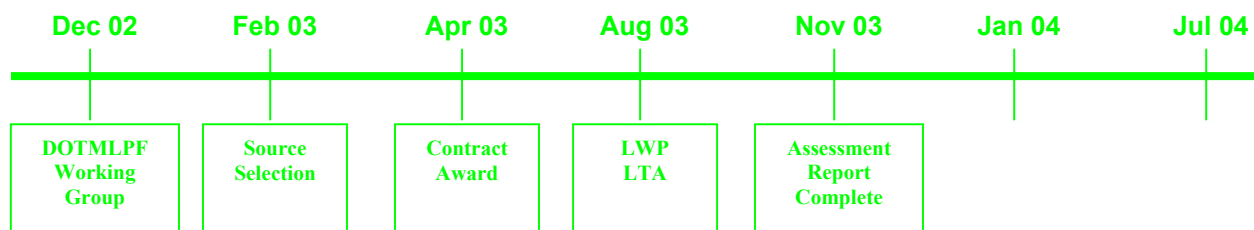


easier to troubleshoot and maintain by field personnel. The current Army design, using a micro filtration pretreatment system, produces excellent quality feed water for the RO system from virtually any natural feed water source, but increased the level of complexity from a troubleshooting and operator interface standpoint. The assessment goal is to identify specific Marine Corps requirements and capabilities not met by the Army LWP and determine if they can be incorporated into a new design. While leveraging the existing Army LWP for Marine Corps use could greatly reduce development time ONR is also investigating commercially available LWP systems that could be used by Marines.

Description: This effort entails performing a market survey of commercially available LWP systems and performing an evaluation of those systems. The evaluation will be set into two phases: the first phase will be conducted by Seawater Desalination Test Facility (SDTF) staff members at NFESC while the second phase will be conducted by the Lab with selected Operational Forces Marines. During the testing phase, data will be gathered to evaluate a system's operational characteristics so a "functional" life cycle cost estimate can be created for each design. In addition, operator opinions will be gathered in a specially formulated questionnaire designed to document exactly what was deemed advantageous and disadvantageous with the various systems.

Deliverable Products: Assessment reports and requirement documentation.

Milestones:



Action Officer: (703) 784-1088